

REMARKS

This response is to the Office Letter mailed in the above-referenced case on January 15, 1999. In the Office Letter the Examiner objects to the drawings as noted on the PTO-948 form attached. Applicant acknowledges the Examiner's notation that this application has been filed with informal drawings. Applicant stands ready to submit formal drawings when the case is allowed, with all the informalities corrected as noted by the Official Draftsperson.

The Examiner requires a new title that is clearly indicative of the invention to which the claims are directed. Applicant has herein provided a new title by amendment. The Examiner has rejected claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over Corley et al. (US 5,838,683) hereinafter Corley. In response to the Examiner's rejections applicant has amended independent claims 1 and 3 to clearly show that it is the unique physical nature of the Bus system of applicant's home network system that is inventive, not merely the protocol. The amendments clearly distinguish over the reference provided by the Examiner.

Claim 1 as amended herein now recites:

1. *A multimedia data distribution system, comprising:
a distribution system adapted to distribute and deliver public network protocol signals to the level of an individual tree-type wiring home network bus;
a micro-PBX connected to the distribution system and to the tree-type wiring home network bus; and*

a converter connected to the tree-type wiring home network bus and having an outlet adapted for connecting to conventional single media and multimedia electronic devices;

wherein the micro-PBX is adapted to translate between the public network protocol and a Local Area Network (LAN) protocol on the tree-type wiring home network bus, and to manage the tree-type wiring home network bus as a non-isochronous type bus, and the converter is adapted to convert signals on the tree-type wiring home network bus to a form required by one of the single media and multimedia electronic devices.

Claim 1 is rejected by the Examiner under 103(a) as being unpatentable over Corley. Applicant has amended claim 1 to limit the home network bus to a tree-wire type home network bus. Also, the applicant has added a limitation wherein the micro-PBX manages the tree-type wiring home network bus as a non-isochronous type bus. In this system type, the sending device first listens on the bus for line free before sending data, then checks for collision. The inventor has selected this type bus management precisely because it allows use of the existing tree-type wiring structure of phone lines of most homes and businesses.

In applicant's invention illustrated with reference to Fig. 3, the Micro-PBX and converter boxes receive power locally at each box by a power converter plugged into a power outlet. Power is supplied at, for example, 48 volts across two lines of the in-house wiring. The power supply voltage is imposed by a transformer/converter box (not shown) that may be placed at any convenient telephone outlet jack outlet and connected to the power mains system available close by.

A micro-PBX 301 is installed at the position of the existing

telephone junction box where outside telephone service enters the premises (a.k.a. service demarcation). A power adapter is installed to provide the necessary power voltage on the in-house network, which is simply a matter of plugging in a power box at any convenient power outlet and connecting an outlet telephone jack into the house network at any convenient outlet port. Converter boxes (see 305a and 305b) are mounted to existing telephone jack outlets convenient to the equipment to be connected.

In micro-PBX 301 the ATM packets are converted to, in this case, TCP/IP protocol, although TCP/IP is not the only choice. Most local-area-network-type protocols could be used easily. Any type of high frequency modulation or direct digital connection could be used that is compatible with asymmetric star wiring (a.k.a. tree-type wiring). This also allows micro-PBX 301 to be added at almost any convenient point on the in-house bus.

Corley teaches a communication network wherein processing, storage and network resources are distributed among subsystems and hubs of the network, allowing the network to be scaleable, fault tolerant, and flexible. Corley discloses first and second client subsystems, a server subsystem, a first signaling channel coupling the first client subsystem to the server subsystem, and a second signaling subsystem connecting the second client to the server subsystem. Corley also teaches an isochronous user information path capable of being coupled between the first and second client subsystems to convey a call between the first and second client subsystems. Corley's system teaches the concept of a client-server-client architecture.

The Examiner states that Corley teaches that existing PBX and LAN topologies are based upon client-server architecture and isochronous

networks. The key to applicant's invention, which Corley does not teach or suggest, is the use of a Micro-PBX coupled to the unique physical structure of the tree-type wiring home network bus enabling multi-access with the existing wiring of the home network. In applicant's invention the communication structure goes from a isochronous type at the PBX to the micro-PBX, and the home network 300 connected after the micro-PBX is in a non-isochronous type structure enabling the existing home wiring to accommodate the multi-access points required to operate home networking for single and multimedia electronic devices with the use of strategically placed converters. In applicant's invention the multimedia electronic devices do not require additional individual connections to a peripheral hub or a multimedia hub as shown in Corley's Fig. 1.

Typical existing networks for multimedia data distribution are of a sort which require a duplication of hardware and data paths, as in Corley, resulting in high cost. Some systems offering a form of integration require expensive new cabling. The system of the present invention avoids such duplication and allows use of existing telephone system wiring in virtually all cases, both in and to the house.

Applicant believes that the reference of Corley clearly fails to teach or suggest a system capable of utilizing the existing tree-type wiring in home networks as taught in applicant's invention. Therefore, the reference of Corley fails in support of a 103(a) rejection in regards to independent claim 1 as amended with the arguments presented above. Applicant respectfully requests that the 103(a) rejection be withdrawn as the newly amended claim 1 is clearly patentable over the reference of Corley. Claim 2 is patentable at least as depended from a patentable claim.

Claim 3 as amended now recites:

3. A home network system, comprising:

a micro-PBX having an inlet port and connected to a tree-type wiring home network bus; and

a converter connected to the tree-type wiring home network bus and having an outlet adapted for connecting to conventional single media and multimedia electronic devices;

wherein the micro-PBX is adapted to translate between a public network data protocol at the inlet port and a Local Area Network (LAN) data protocol on the tree-type wiring home network bus, and to manage the tree-type wiring home network bus as a non-isochronous type bus, and the converter is adapted to convert signals on the tree-type wiring home network bus to a form required by one of the single media and multimedia electronic devices.

Claim 3 is rejected by the Examiner for substantially the same reasoning as provided for claim 1. Applicant has added the same limitations to claim 3 by amendment as those added to claim 1. Therefore, claim 3 is also patentable over the art of Corley as argued on behalf of claim 1 above. Claim 4 is patentable at least as depended from a patentable claim.

As all of the claims standing for examination as amended have been shown to be patentable over the art of record, applicant respectfully requests reconsideration and that the present case be passed quickly to issue. If there are any time extensions due beyond any extension requested and paid with this amendment, such extensions are hereby requested. If there are any fees due beyond any fees paid with the present amendment, such fees are

authorized to be deducted from deposit account 50-0534.

If there are any extensions required, such extensions are respectfully requested. If there are any fees due, authorization is given to deduct the fees from deposit account 10-1218.

Respectfully Submitted,

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